

Application Serial No 10/516,430

MAY 14 2008

**Amendments to the Claims**

Please amend the claims as indicated, with insertions indicated by underlining and deletions by strikethrough.

- 1 (Currently amended) A method of identifying a fetal cell in a maternal blood sample, the method comprising:
  - a) obtaining a sample of maternal blood that contains one or more fetal cells; and
  - b) detecting a maternal antibody bound to a paternally inherited fetal antigen on a fetal cell.
2. (Currently Amended) The method of claim 1, wherein the method further comprises exposing the maternal antibody bound to a fetal cell to an agent capable of forming a complex with the maternal antibody.
3. (Currently Amended) The method of claim 2, wherein the agent is detectably labelled.
4. (Currently Amended) The method of claim 3, wherein the label is used to detect the fetal cell-maternal antibody complex.
5. (Original) A method of identifying a fetal cell in a sample, the method comprising exposing cells in the sample to maternal antibodies, and detecting a maternal antibody bound to a fetal cell, wherein the maternal antibodies comprise maternally produced antibodies specific for paternally-inherited fetal antigens.
6. (Currently Amended) The method according to claim 5, wherein the maternal antibodies are prepared by a process comprising dissociation of antibodies from a complex with a soluble HLA antigen and/or an anti-idiotypic antibody.
7. (Currently Amended) The method of claim 5, wherein the method further comprises exposing the maternal antibody bound to a fetal cell to an agent capable of forming a complex with the maternal antibody.

*Application Serial No. 10/516,430*

8. (Currently Amended) The method according to claim 7, wherein the agent is an antibody or antibody fragment.
9. (Currently Amended) The method according to claim 7, wherein the agent is a polypeptide that binds to an immunoglobulin.
10. (Currently Amended) The method of claim 9, wherein the polypeptide is selected from the group consisting of: protein A, protein G and protein L.
11. (Currently Amended) The method according to claim 7, wherein the agent is detectably labelled.
12. (Currently Amended) The method of claim 11, wherein the label on the agent is used to detect the fetal cell-maternal antibody complex.
13. (Previously presented) The method according to claim 12, wherein the label is selected from the group consisting of: a fluorescent label, a radioactive label, a paramagnetic particle, a chemoluminescent label, an enzymatic label and a label that is detectable by binding to a molecule.
14. (Currently Amended) The method of claim 13, wherein the label is a paramagnetic particle and wherein the step of detecting the fetal cell-maternal antibody complex comprises exposing the cells bound by agent-maternal antibody complexes to a magnet.
15. (Currently Amended) The method according to claim 13, wherein the label is a fluorescent label and wherein the step of detecting the fetal cell-maternal antibody complex comprises performing fluorescence activated cell sorting.
- 16-57. (Canceled)

*Application Serial No. 10/516,430*

58. (New) The method of claim 1, further comprising:

- i) isolating a fraction comprising peripheral blood mononuclear cells from the sample;
- ii) contacting fetal cells bound to maternal antibodies with an agent capable of forming a complex with maternal antibodies; and
- iii) recovering fetal cells bound to agent-maternal antibody complexes.

59. (New) The method of claim 58, further comprising adding maternal antibodies against a paternally inherited fetal antigen to the isolated peripheral blood mononuclear cells under conditions that allow the maternal antibodies to bind to the fetal cells.

60. (New) The method of claim 59, further comprising depleting the peripheral blood mononuclear cells of at least one type of maternal cell.

61. (New) The method of claim 59, wherein the maternal antibodies against a paternally inherited fetal antigen are obtained from the blood of the same individual as the maternal blood sample.

62. (New) The method of claim 59, wherein the peripheral blood mononuclear cells are cultured in vitro before the maternal antibodies are added.

63. (New) The method of claim 58, wherein the agent is bound to a detectable label or isolatable label.

64. (New) The method of claim 63, wherein the detectable or isolatable label is selected from the group consisting of a fluorescent label, a radioactive label, a paramagnetic particle, a chemoluminescent label, an enzymatic label, and a label that is detectable by virtue of binding to a molecule.

65. (New) The method of claim 63, wherein the step of recovering fetal cells bound to agent-maternal antibody complexes comprises detecting the label and separating a fraction comprising the label.

*Application Serial No. 10/516,430*

66. (New) The method of claim 65, wherein the label is a fluorescent label and the step of recovering cells bound by agent-maternal antibody complexes comprises performing fluorescence activated cell sorting.

67. (New) The method of claim 65, wherein the label is a paramagnetic particle and the step of recovering cells bound by agent-maternal antibody complexes comprises exposing the cells bound by agent-maternal antibody complexes to a magnet.

68. (New) The method of claim 58, wherein the agent is an antibody or fragment of an antibody.